

Healthy People 2010 snapshot for the Hispanic population: Progress toward targets, size of disparities, and changes in disparities

*By Suzanne Hallquist, M.S.P.H., Tamyra Garcia, M.P.H., and Kenneth Keppel, Ph.D.,
Office of Analysis and Epidemiology, National Center for Health Statistics, Centers for Disease
Control and Prevention*

INTRODUCTION

Healthy People 2010 is a comprehensive, national agenda for improving the health of the U.S. population by the year 2010. It has two overarching goals: (1) increase quality and years of healthy life and (2) eliminate health disparities. These goals are supported by 955 health objectives and subobjectives organized in 28 different focus areas. Every measurable objective has a target to be achieved by the year 2010. Data from dozens of data systems are assembled for this wide range of health objectives, and progress toward these two goals is being monitored for the total population and for specific subgroups (1).

This snapshot is one in a series of five reports, one for each of the following racial and ethnic populations: American Indian or Alaska Native, Asian, Hispanic or Latino, non-Hispanic black, and non-Hispanic white. This series complements *Healthy People Statistical Note No. 26*, entitled, “Comparing Racial and Ethnic Populations Based on Healthy People 2010 Objectives.” That report compares these five racial and ethnic populations in terms of progress toward Healthy People 2010 targets, the size of disparities, and changes in disparities over time (2). The purpose of the snapshots is to provide a more detailed look at data for each racial and ethnic population based on the Healthy People 2010 objectives. These are the first comprehensive population-specific analyses undertaken for Healthy People 2010 and can be accessed at http://www.cdc.gov/nchs/healthy_people/hp2010/hp2010_snapshots.htm.

Healthy People Statistical Note No. 26 is based on specific sets or groups of objectives with data for several racial and ethnic populations. This snapshot is based on *all* of the objectives with data for the Hispanic population and provides detailed information related to:

- *Availability of data* for objectives in each Healthy People 2010 focus area.
- *Progress* toward the target for Healthy People 2010 objectives.
- Number and types of objectives for which the Hispanic population had the “*best*” rate.
- Number and types of objectives for which the Hispanic population had the *largest disparities* relative to the racial and ethnic group with the best rate.
- Number and types of objectives for which *disparity is increasing or decreasing* for the Hispanic population, relative to the racial and ethnic group with the “best” rate.
- Relationship between *progress toward targets and changes in disparity* over time.

METHODS

A detailed description of the methods used to assess progress and disparity for these racial and ethnic populations is provided in *Healthy People Statistical Note No. 26 (2)*. However, a brief overview is provided below.

Data

Among the *Healthy People 2010* objectives, there are 504 that call for data by demographic characteristics including race and ethnicity. These “population-based” objectives are measured in terms of the rate or proportion of individuals with a particular health attribute, such as a health condition or outcome, a known health risk, or utilization of a specific health care service. All of the population-based objectives in *Healthy People 2010* call for tracking data by gender, race and ethnicity, and socio-economic status. However, data for each racial and ethnic group are not available for all objectives. This report is based on data in the *Healthy People 2010* database (DATA2010) as of August 2007. This point in time was consistently employed for *Healthy People Statistical Note No. 26* and for the five snapshots in this series. For some objectives, only a single baseline data point was available. For most objectives, more recent data points were available. There are 358 population-based objectives with at least one data point for the Hispanic or Latino population. There are 34 objectives based on data from the National Health and Nutrition Examination Survey (NHANES). This survey provides data representative of the Mexican American subgroup of the Hispanic or Latino population. Objectives based on data for the Mexican American population are footnoted in tables showing findings for specific objectives.

Measuring progress toward targets

Two or more data points are needed to evaluate progress toward a *Healthy People 2010* target. As of August 2007, 270 of the objectives with data for the Hispanic population had two or more data points. Progress toward reaching the 2010 targets was categorized as follows: moving away from the target, no change, moving toward the target, met or exceeded the target, and met the target at baseline. Objectives that met the target at baseline remain in that category only if they continue to meet the target at the most recent data point. When measures of variability were available, the statistical significance of the change toward or away from the target was tested. However, the results of the significance test did not affect the category to which an objective was assigned. Each category contains some objectives for which the change was significant, some for which the change was not significant, and some for which the change could not be tested.

Measuring the size of disparities

Disparity was calculated at the baseline and/or at the most recent data point, when data for more than one racial and ethnic group were available. The percent difference between the Hispanic group rate and the “best” group rate among the other racial and ethnic groups was calculated for 328 population-based objectives at the most recent data point. The “best” group rate is the most favorable racial and ethnic group rate. Having the “best” group rate does not imply that the rate for that racial and ethnic group cannot be improved. When measures of variability were

available, the statistical significance of the percent difference was tested. The distribution of objectives by size of disparity at the most recent data point is presented for the Hispanic population using the following categories: best group rate, less than 10% different from the best group rate or not statistically significant, 10-49%, 50-99%, 100-199%, and 200% or more different from the best group rate. The latter four categories include objectives for which the percent difference was statistically significant and objectives for which the percent difference could not be tested.

Measuring changes in disparity

To assess changes in disparity over time, the percent difference between the rate for the Hispanic or Latino population and the “best” group rate at the baseline was subtracted from the percent difference at the most recent data point. The change is expressed in percentage points. Both disparity and trend data were required to measure changes in disparity over time. This created a subset of objectives that was smaller (234 objectives) than the number of objectives used to measure disparity at a single point in time (358 objectives). When measures of variability were available, the significance of changes in disparity was tested. Increases or decreases in disparity that were either less than 10 percentage points or were 10 percentage points or more but not statistically significant were classified as “no change.” Objectives with increases or decreases of 10 percentage points or more include some for which the change was significant and some for which the change could not be tested.

Evaluating the association between progress and changes in disparity

The number of objectives with increasing disparity, decreasing disparity, and no change in disparity are shown for each of three categories of progress toward the HP2010 target. There were 234 objectives with the data required to assess both progress toward targets and changes in disparity for the Hispanic population. Objectives where the target was met at the baseline (13 objectives) were excluded from the analysis, decreasing the number of objectives analyzed to 221 objectives. Progress toward the HP2010 target and progress toward eliminating disparities are independent. To illustrate this point, we examined progress and change in disparity for new cases of tuberculosis in the United States from 1998 to 2005.

Statistical significance

Estimates of variability were available for about three-quarters of the population-based objectives in *Healthy People 2010*. When estimates of variability were available, statistical tests were employed to assess the probability that differences or changes occurred by chance. When a percent difference from the best group rate was greater than 10 percent and not statistically significant, it was categorized in the less than 10 percent category. When estimates of variability were not available, statistical tests could not be used to lend confidence to findings concerning differences and changes.

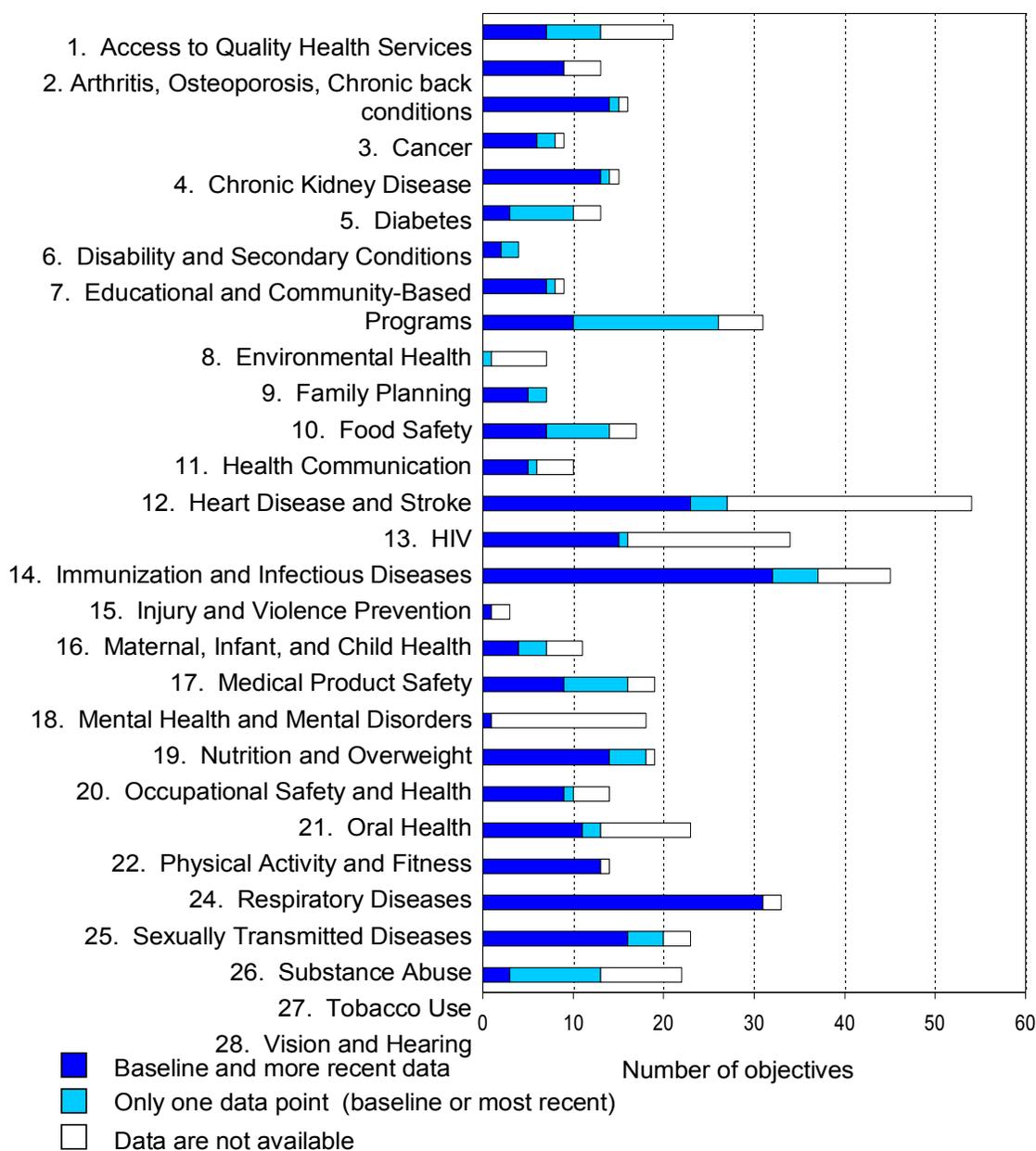
Limitations

There are some limitations to the findings in this report. Data are not available by race and ethnicity for all of the population-based objectives in *Healthy People 2010*. In addition, the validity of the findings in this report depends on the accuracy of data by race and ethnicity. There are differences in racial and ethnic categories because the data are collected in different ways by different data collection systems (4). Progress toward targets and changes in disparity are measured from the baseline to the most recent data point and intervening values are not considered. Baseline and most recent data years vary among objectives tracked using different data sources, resulting in shorter and longer time intervals for some objectives. Finally, the results shown here may look different if more recent data were examined. Despite these limitations, nearly all of the data analyzed here are routinely disseminated by agencies of the federal government.

FINDINGS

- *Data for the Hispanic or Latino population were available for 358 of the 504 Healthy People 2010 population-based objectives (71%).*

Figure 1. Healthy People 2010 objectives with data for the Hispanic or Latino population by focus area ^{a,b}



^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

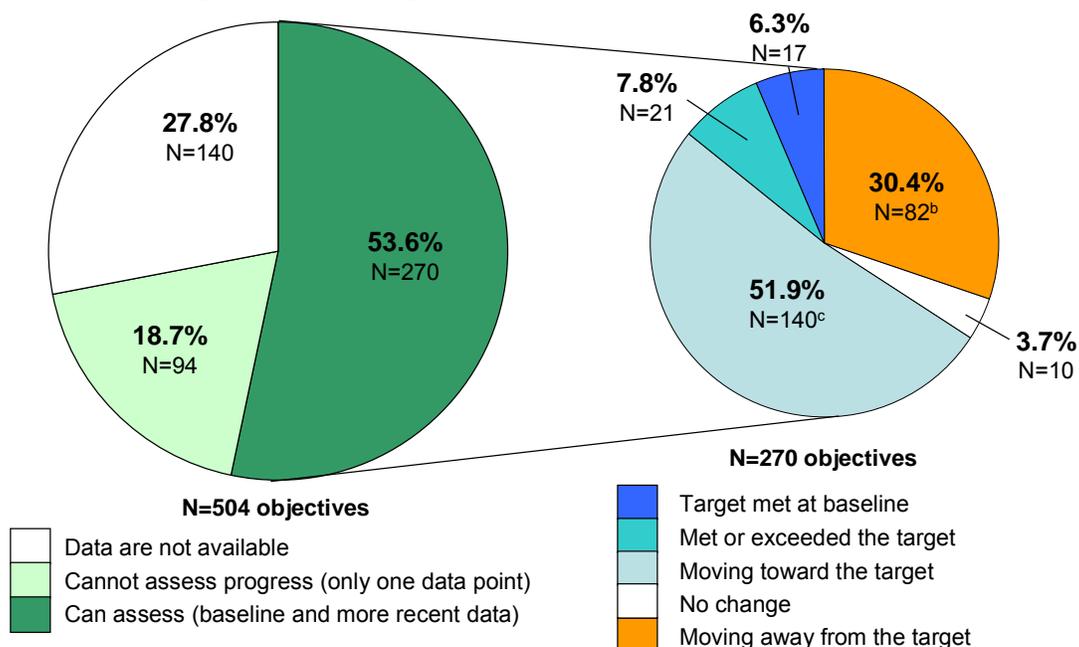
^b The Public Health Infrastructure focus area (FA-23) does not include any population-based objectives.

Every Healthy People 2010 focus area containing one or more population-based objectives had at least one objective with data for the Hispanic or Latino population. However, the percentage of objectives with data for the Hispanic population varied by focus area. Six focus areas had data for the Hispanic population for more than 90% of their objectives: Cancer (94%), Diabetes (93%), Educational and Community-Based Services (100%), Health Communication (100%), Oral Health (95%), Sexually Transmitted Diseases (93%), and Substance Abuse (94%). Three focus areas had data for Hispanics for less than one third of their objectives: Food Safety (14%), Medical Product Safety (33%), and Occupational Safety and Health (6%).

The Food Safety focus area (FA-10) was the only focus area without any objectives with trend data for the Hispanic population. In 21 of the 27 focus areas with population-based objectives, objectives with two or more data points outnumbered objectives with only a single (baseline) data point.

- About two-thirds of the population-based objectives with data for the Hispanic or Latino population were moving toward or had met their targets at the most recent data point.

Figure 2. Percent distribution of Healthy People 2010 objectives by categories of progress toward targets for the Hispanic or Latino population^a



Note: Percentages may not sum to 100% due to rounding.

^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

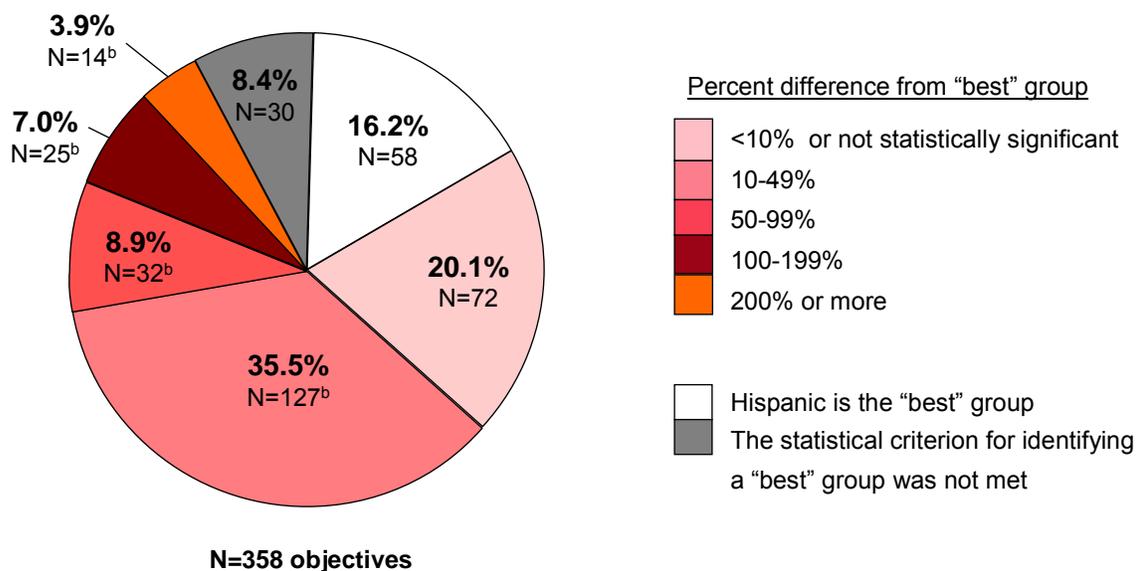
^b 82 objectives moved away from the target. For 21 objectives the change was statistically significant, for 45 the change was not significant, and for 16 significance could not be tested.

^c 140 objectives moved toward the target. For 44 the improvement was statistically significant, for 60 the change was not significant, and for 36 significance could not be tested.

Of the 504 Healthy People 2010 population-based objectives, 270 (54%) had both a baseline and a more recent data point for the Hispanic population. Progress toward the Healthy People 2010 targets could be assessed for these objectives. Over half (52%) of these objectives moved toward their target; 8 percent met or exceeded their target; and 6 percent met their target at the baseline. Thirty percent were moving away from their targets. For the remaining four percent of the objectives, there was no change from the baseline. The percentage of objectives that met or were moving toward the target is very similar to the percentage for the other racial and ethnic populations (see *Healthy People Statistical Note No. 26*).

- *The Hispanic or Latino population had the most favorable rate for 16 percent of the objectives.*

Figure 3. Percent distribution of Healthy People 2010 population-based objectives by size of disparity at most recent data point for the Hispanic or Latino population^a



^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

^b Includes objectives for which the disparity is statistically significant and objectives for which the disparity could not be tested. Differences that were $\geq 10\%$ and not statistically significant are included in the "<10% or not statistically significant" category

Data for the Hispanic or Latino population were available for 358 objectives. However, racial and ethnic disparities could not be assessed for 30 (8%) of the objectives because the statistical criterion for identifying a best group rate was not met (refer to *Healthy People Statistical Note No. 26*, methods section). The Hispanic population had the best rate at the most recent data point for 16 percent of the objectives. The specific objectives for which the Hispanic population had the best rate are identified in Table 1. For 20 percent of these 358 objectives, the Hispanic population had rates that were *less than 10 percent different* from the best group rate or that were not statistically different from the best group rate. However, at the other extreme, the Hispanic population had rates that were *100 percent or more* different from the best group for 11 percent of these 358 objectives. A 100 percent difference means that the rate for the Hispanic population was at least two times the best group rate. The ten largest disparities for the Hispanic population are identified in Table 2.

- *The Hispanic or Latino population had the best rate for at least one objective in 22 of the 27 focus areas with population-based objectives.*

| Objective number | Objective | Most recent data year |
|------------------|--|-----------------------|
| 01-03f | Counseling about unintended pregnancy: females 15-44 years | 2002 |
| 01-03h | Counseling about management of menopause: females 45 to 57 years | 2001 |
| 02-08 | Arthritis education: 18+ years with arthritis | 2003 |
| 02-11 | Activity limitations due to chronic back conditions: 18+ years | 2005 |
| 03-02 | Lung cancer deaths | 2004 |
| 03-06 | Oropharyngeal cancer deaths | 2004 |
| 03-08 | Melanoma deaths | 2004 |
| 03-09a | Protective sun exposure measures: adolescents grades 9-12 | 2005 |
| 04-04 | Use of arteriovenous fistulas by new hemodialysis patients: 20+ years | 2003 |
| 05-06 | Diabetes-related deaths among persons with diabetes [†] | 2004 |
| 05-07 | Cardiovascular disease deaths among persons with diabetes | 2004 |
| 06-12d | Environmental barriers affecting participation in community activities: 18+ years with disabilities [†] | 2002 |
| 07-06 | Participation in employer-sponsored health promotion activities: 18+ years | 1998 |
| 08-01d | Harmful air pollutants: Nitrogen dioxide | 2004 |
| 08-01f | Harmful air pollutants: Lead | 2004 |
| 09-02 | Birth spacing greater than 24 months: females 15-44 years | 2002 |
| 09-06a | Family planning clinic visit in last 12 months: partners of unmarried males 15-24 years | 2002 |
| 09-09a | Abstinence: females 15 to 17 years | 2002 |
| 09-12 | Problems becoming pregnant and maintaining a pregnancy: married females 15-44 years | 2002 |
| 12-09 | High blood pressure: 20+ years [¶] | 2001-2004 |
| 13-16 | HIV infected persons surviving more than 3 years after a diagnosis of AIDS | 2001 |
| 14-03b | Hepatitis B in adults and high-risk groups: 25-39 years | 2005 |
| 14-05d | Invasive penicillin-resistant pneumococcal infections: 65+ years | 2002 |
| 14-22b | Haemophilus influenzae type b (Hib) vaccine, 3 doses: children 19-35 months [†] | 2005 |
| 14-22e | Polio vaccine, 3 doses: children 19-35 months | 2005 |
| 15-04 | Loaded and unlocked firearms in homes: 18+ years [†] | 1998 |
| 15-25 | Residential fire deaths | 2004 |
| 15-29 | Drownings | 2004 |
| 16-01g | Congenital heart defects deaths: infants < 1 year | 2003 |
| 16-01h | Sudden Infant death syndrome (SIDS) deaths: infants < 1 year | 2003 |
| 16-04 | Maternal deaths | 2004 |
| 16-10a | Low birth weight (LBW): infants < 2,500 grams | 2004 |
| 16-18 | Fetal alcohol syndrome | 1995-1997 |
| 16-19d | Exclusive breastfeeding through 3 months | 2002 |
| 19-05 | Fruit intake: ≥ 2 servings/day, 2+ years | 1994-1996 |
| 19-08 | Saturated fat intake: < 10% of caloric intake, 2+ years | 1994-1996 |
| 19-09 | Total fat intake: $\leq 30\%$ of caloric intake, 2+ years | 1994-1996 |
| 19-10 | Total sodium intake: < 2,400 mg/day, 2+ years [¶] | 1988-1994 |

| | | |
|--------|--|-----------|
| 21-01c | Dental caries in permanent teeth: adolescents 15 years [¶] | 1999-2002 |
| 21-05b | Destructive periodontal disease: 35-44 years [¶] | 1999-2000 |
| 22-07 | Vigorous physical activity: grades 9-12 | 2005 |
| 22-09 | Participation in daily physical education: grades 9-12 | 2005 |
| 22-10 | Physical activity in physical education class: grades 9-12 | 2005 |
| 24-01c | Deaths from asthma: 15-34 years [†] | 2004 |
| 24-01e | Deaths from asthma: 65+ years | 2004 |
| 24-04 | Activity limitations among persons with asthma [†] | 2005 |
| 25-11b | No sexual intercourse in the past 3 months: grades 9-12 | 2005 |
| 26-10c | Illicit drug use in the past 30 days: 18+ years | 2003 |
| 26-11d | Binge drinking: 12-17 years | 2003 |
| 26-15 | Inhalant use: 12-17 years [†] | 2003 |
| 26-16e | Disapproval of trying marijuana or hashish once or twice: high school sophomores | 2004 |
| 27-09 | Exposure to tobacco smoke at home [†] | 2005 |
| 27-10 | Exposure to environmental tobacco smoke: nonsmokers 4 years and over [¶] | 1999-2000 |
| 27-17c | Adolescent disapproval of smoking: high school seniors | 2003 |
| 28-07 | Visual impairment due to cataract: 65+ years [†] | 2002 |
| 28-09a | Use of protective eyewear at home always or most of the time: 6-17 years | 2002 |
| 28-09b | Use of protective eyewear at home always or most of the time: 18+ years | 2002 |
| 28-16a | Use of ear protection devices when exposed to loud noises: 20- 69 years [¶] | 1999-2000 |

^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

^b The Hispanic population had the "best" rate among the racial and ethnic populations at the most recent data point, which is the baseline if there is no more recent data point.

[†] The rate for the Hispanic population was the most favorable but it did not meet the statistical criterion for being the "best" rate (having a relative standard error less than 10%). The population with the next best rate was chosen as the "best" rate.

[¶] Data for this objective are for the Mexican American population.

The Hispanic or Latino population had the best rate for 58 Healthy People 2010 objectives at the most recent data point. The distribution of objectives for which the Hispanic population had the best rate was fairly even across the focus areas: Hispanics had the best rate for at least one objective in 22 of the 27 focus areas with population-based objectives. There were seven focus areas in which the Hispanic population had the best rate for four or more objectives: Cancer (FA-03); Family Planning (FA-09); Immunization and Infectious Disease (FA-14); Maternal, Infant, and Child Health (FA-16); Nutrition and Overweight (FA-19); Substance Abuse (FA-26); and Vision and Hearing (FA-28). On the other hand, there were five focus areas in which the Hispanic population was not the best group for any objective: Food Safety; Health Communication; Medical Product Safety; Mental Health and Mental Illness; and Occupational Safety and Health.

- *The four largest disparities for the Hispanic population relative to the “best” racial and ethnic population were related to infectious diseases.*

Table 2. Ten largest health disparities for the Hispanic or Latino population: *Healthy People 2010* objectives ^a

| Rank | Objective | Most recent data year | Best group rate Population | Hispanic rate | Percent difference from the best group rate | Number of cases in most recent data year | Estimated number of cases if best rate had been attained [§] |
|------|--|-----------------------|----------------------------|---------------|---|--|---|
| 1 | 25-9. Congenital syphilis (per 100,000 live births) | 2004 | 2.0 Non-Hispanic white | 16.0 | 700 † | 144 | 20 |
| 2 | 14-11. Tuberculosis (new cases per 100,000 population) | 2005 | 1.3 Non-Hispanic white | 9.5 | 631 † | 4,043 | 550 |
| 3 | 13-1. AIDS: 13+ years (new cases per 100,000 population) | 2005 | 4.3 Asian | 24.0 | 458 † | 7,676 | 1,375 |
| 4 | 14-6. Hepatitis A (new cases per 100,000) | 2005 | 0.5 American Indian | 2.7 | 440 † | 1,146 | 210 |
| 5 | 8-1c. Carbon monoxide exposure (percent) | 2004 | 3.7 Non-Hispanic black | 19.6 | 430 † | 6,910,900 | 1,304,600 |
| 6 | 8-1b. Particulate matter exposure: ≤ 10 um (percent) | 2004 | 5.8 Non-Hispanic black | 28.3 | 388 † | 9,982,000 | 2,045,800 |
| 7 | 11-2b. Below basic health literacy: 16+ years (percent) | 2003 | 8.6 Non-Hispanic white | 41.2 | 380 * | Not available | Cannot be estimated |
| 8 | 26-2. Cirrhosis deaths (age adjusted, per 100,000 population) | 2004 | 3.2 Asian | 14.0 | 338 * | 3,383 | 2,670 |
| 9 | 1-4b. No source of ongoing care: ≤ 17 yrs. (age adjusted, per 100,000 population) | 2005 | 3.0 Non-Hispanic white | 11.4 | 280 * | 1,604,500 | 431,800 |
| 10 | 7-1. Did not complete high school: 18-24 yrs. (percent) | 2004 | 8.3 Non-Hispanic white | 30.2 | 264 * | 1,399,000 | 384,500 |

^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

[§] An estimate of the number of events that would have occurred in the most recent data year if the Hispanic population had the best group rate was obtained by multiplying the best group rate times an estimate of the population at risk.

[†] Measures of variability were not available. The statistical significance of the percent difference could not be tested.

* The percent difference from the best group rate is statistically significant at the 0.05 level.

The ten largest health disparities in the Hispanic or Latino population included objectives from eight focus areas: Sexually Transmitted Diseases; Immunization and Infectious Diseases; HIV; Environmental Health; Health Communication; Substance Abuse; Access to Quality Health Services; and Education and Community-Based Services. Four objectives were related to infectious diseases: Congenital syphilis (25-9), tuberculosis (14-11), AIDS (13-1), and hepatitis A (14-6). And two objectives were related to air quality: carbon monoxide exposure (8-1c) and particulate matter exposure (8-1b).

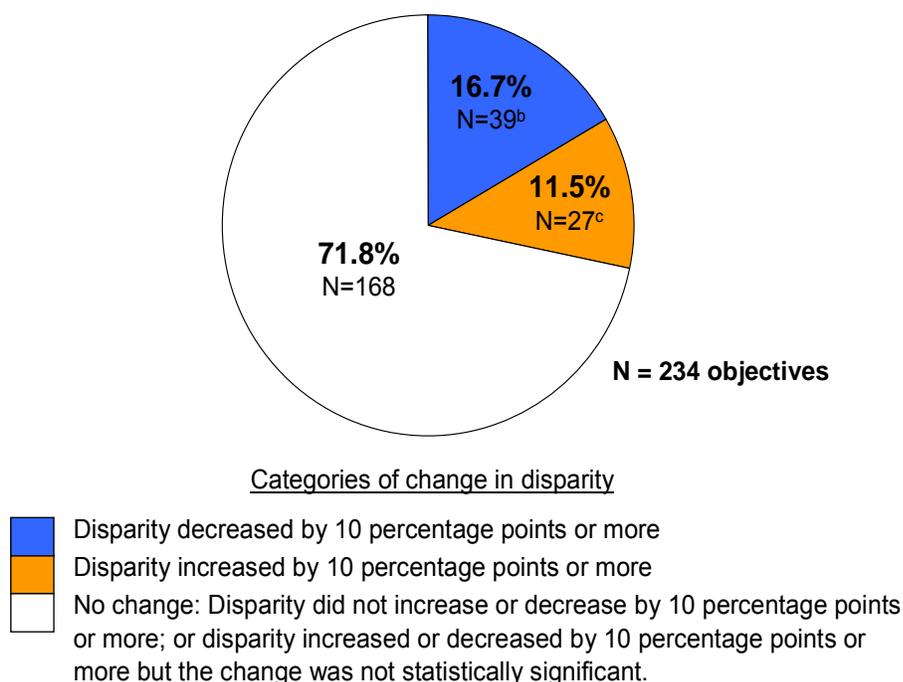
Notably, the Hispanic population shares three of its largest disparities with the non-Hispanic black population: Congenital syphilis (25-9); new cases of tuberculosis (14-11); and new cases of AIDS among persons 13 years and over (13-1). It also shares two of its largest disparities with the American Indian or Alaska Native population: New cases of tuberculosis (14-11) and cirrhosis deaths (26-2).

Note that among the objectives with the largest relative disparities, the absolute number of persons affected varies considerably. For example, the rate of congenital syphilis was 16 cases per 100,000 live births in the Hispanic population and 2 cases per 100,000 live births in the non-Hispanic white population in 2004. This represented a 700 percent difference between the groups. If the Hispanic population had attained the same rate as the best racial and ethnic group (2 cases per 100,000 live births) the total number of cases in the Hispanic population would have been 20. In actuality, the total number of cases in the Hispanic population was 144. Thus, the excess number of infants affected by congenital syphilis as a result of the disparity was approximately 124. This demonstrates that the size of the relative disparity is not always related to the number of persons affected.

On the other hand, there are examples where the number of cases in the most recent data year substantially exceeds the number of cases that would have occurred if the best rate had been attained. One example is objective 13-1, new AIDS cases among persons 13 years and over, where the actual number of cases in 2005 (7,676) greatly exceeded the number that would have occurred (1,375) if the Hispanic population had achieved the same rate as the best racial and ethnic group (Asian).

- *The disparity between the Hispanic or Latino population and the best racial or ethnic population did not change over time for more than 70 percent of the objectives. Where there were changes in disparity, decreases outnumbered increases.*

Figure 4. Percent distribution of Healthy People 2010 population-based objectives by categories of change in disparity over time for the Hispanic or Latino population^a



a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

b Disparity decreased by 10 percentage points or more for 39 objectives. The decrease was statistically significant for 18 objectives. Significance could not be tested for 21 objectives.

c Disparity increased by 10 percentage points or more for 27 objectives, for 14 the increase was statistically significant, and for 13 significance could not be tested.

Disparities between the Hispanic or Latino population and the population with the best rate decreased for 39 objectives between the baseline and the most recent data point (17%). The decrease was statistically significant for fewer than half of these objectives; significance could not be tested for the remainder. For 27 objectives (12%), an increase in disparity from baseline to the most recent data point was observed. The increase was statistically significant for more than half of these objectives; significance could not be tested for the remainder. There was no change in disparity over time for 168 objectives (72%). As noted in the Methods section above, the statistical significance of changes in disparity could not be tested where measures of variability were not available.

- *Disparities for the Hispanic or Latino population decreased for 39 objectives, including 8 objectives related to substance abuse.*

Table 3. Healthy People 2010 objectives with decreasing disparities for the Hispanic or Latino population ^a

| Objective number | Objective | Baseline data year | Most recent data year |
|---|--|--------------------|-----------------------|
| 100 percentage point or more decrease in disparity | | | |
| 8-1d. | Harmful air pollutants: nitrogen dioxide exposure [†] | 1997 | 2004 |
| 13-1. | New AIDS cases: 13+ years [†] | 1998 | 2005 |
| 14-3c. | Hepatitis B: 40+ years [†] | 1997 | 2003 |
| 15-5. | Nonfatal firearm-related injuries [†] | 1997 | 2004 |
| 25-3. | Primary and secondary syphilis: domestic transmission [†] | 1997 | 2004 |
| 26-3. | Drug-induced deaths * | 1999 | 2004 |
| 26-11d. | Binge drinking: 12-17 years * | 2002 | 2003 |
| 50-99 percentage point decrease in disparity | | | |
| 14-03b | Hepatitis B: 25-39 years [†] | 1997 | 2005 |
| 14-22b. | Haemophilus influenzae type b (Hib) vaccine - 3 doses: children 19-35 months * | 2000 | 2005 |
| 15-8. | Deaths from poisoning * | 1999 | 2004 |
| 19-3a. | Overweight or obesity: 6-11 years * [¶] | 1988-1994 | 1999-2000 |
| 25-1c. | Chlamydia infections among males attending STD clinics: 15-24 years [†] | 1999 | 2004 |
| 25-9. | Congenital syphilis [†] | 1997 | 2004 |
| 26-14c. | Steroid use: high school seniors [†] | 1998 | 2004 |
| 10-49 percentage point decrease in disparity | | | |
| 3-11b. | Pap tests received in past 3 years: 18+ years * | 1999 | 2005 |
| 4-1. | End-stage renal disease: new cases * | 1997 | 2004 |
| 4-7. | End-stage renal disease due to diabetes: new cases * | 1997 | 2004 |
| 5-3. | Prevalence of diabetes * | 1999 | 2005 |
| 9-2. | Births occurring within 24 months of a previous birth: females 15-44 years * | 1995 | 2002 |
| 9-9a. | Abstinence: females 15-17 years * | 1995 | 2002 |
| 13-16. | HIV infected persons surviving 3+ years after a diagnosis of AIDS [†] | 1998 | 2001 |
| 14-12. | Curative therapy for tuberculosis [†] | 1996 | 2003 |
| 14-22c. | Hepatitis B (hep B) vaccine - 3 doses: children 19-35 months * | 2000 | 2005 |
| 16-1a. | Fetal deaths at 20 or more weeks gestation * | 1997 | 2004 |
| 16-4. | Maternal deaths * | 1999 | 2004 |
| 19-2. | Obesity in adults: 20+ years * [¶] | 1988-1994 | 1999-2002 |
| 20-1a. | Work-related injury deaths: 16+ years [†] | 2000 | 2003 |
| 21-5b. | Destructive periodontal disease: 35-44 years * [¶] | 1988-1994 | 1999-2000 |
| 22-7. | Vigorous physical activity: high school students * | 1999 | 2005 |
| 24-1e. | Deaths from asthma: 65+ years * | 1999 | 2004 |
| 24-12. | Motor vehicle crash deaths caused by excessive sleepiness [†] | 2000 | 2004 |
| 25-1a. | Chlamydia infections among females attending family planning clinics: 15-24 year: | 1997 | 2004 |
| 25-1b. | Chlamydia infections among females attending STD clinics: 15-24 years [†] | 1997 | 2004 |
| 26-13a. | Exceeding guidelines for low-risk drinking: females 21+ years [†] | 1992 | 2001-2002 |
| 26-13b. | Exceeding guidelines for low-risk drinking: males 21+ years [†] | 1992 | 2001-2002 |
| 26-14a. | Steroid use: 8th graders [†] | 1998 | 2004 |
| 26-14b. | Steroid use: 10th graders [†] | 1998 | 2004 |
| 26-16a. | Disapproval of 1-2 drinks a day of alcohol: 8th graders [†] | 1998 | 2004 |
| 27-17c. | Disapproval of smoking: high school seniors [†] | 1998 | 2003 |

^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

* The decrease in disparity from the baseline to the most recent data value is statistically significant at the 0.05 level.

[†] Measures of variability were not available. The statistical significance of changes in disparity could not be tested.

[¶] Data for this objective are for the Mexican American population.

Eight objectives in the Substance Abuse focus area (FA-26) are highlighted.

Disparities decreased for the Hispanic or Latino population for 39 objectives. The majority of these objectives (25 of 39) demonstrated a decrease in disparity of 10-49 percentage points. The decreases of this magnitude were spread across 15 focus areas. Seven objectives demonstrated a decrease in disparity of 50-99 percentage points and an additional seven demonstrated a decrease of 100 percentage points or more. Of those 14 objectives, three were from the Substance Abuse focus area: Drug-induced deaths (26-3), binge drinking among adolescents (26-11d), and steroid use among high school seniors (26-14c).

Although disparity decreased for the Hispanic population relative to the best racial and ethnic population for all of the objectives listed in Table 3, it should be noted that this did not always mean that the rate for the Hispanic group was improving (i.e., moving toward the target). In some instances, the rate for the Hispanic population was farther away from the target at the most recent data point than it was at the baseline. For example, for domestic transmission of primary and secondary syphilis (25-3), the Hispanic population had a rate of 1.6 per 100,000 at the baseline in 1997 and 3.2 per 100,000 in 2004. The best group (Asian or Pacific Islander) had a rate of 0.3 per 100,000 at the baseline and 1.2 per 100,000 in 2004. The net result was a decrease in disparity for the Hispanic population because the best group rate increased by a *greater proportion* than the rate for the Hispanic population. In instances like this, where reduction in disparity is accompanied by movement away from the target for both racial and ethnic groups, it is difficult to view the reduction as a “success.”

- Disparities for the Hispanic or Latino population increased for 27 objectives. *Relative to the best group rate, disparities increased for four objectives in the Environment Health focus area (FA-08) and three objectives in each of the following focus areas: Access to Quality Health Services (FA-01); Maternal, Infant, and Child Health (FA-16); and Substance Abuse (FA-26).*

Table 4. Healthy People 2010 objectives with increasing disparities for the Hispanic or Latino population ^a

| Objective number | Objective | Baseline data year | Most recent data year |
|---|--|--------------------|-----------------------|
| 100 percentage point or more increase in disparity | | | |
| 8-1b. | Harmful air pollutants: particulate matter exposure (≤ 10 μm) [†] | 1997 | 2004 |
| 8-1c. | Harmful air pollutants: carbon monoxide exposure [†] | 1997 | 2004 |
| 14-11 | Tuberculosis - new cases [†] | 1998 | 2005 |
| 26-11c. | Binge drinking: 18+ years * | 2002 | 2003 |
| 50-99 percentage point increase in disparity | | | |
| 27-2b. | Adolescent use of cigarettes in past month: high school students * | 1999 | 2005 |
| 10-49 percentage point increase in disparity | | | |
| 1-4a. | Source of ongoing care * | 1999 | 2005 |
| 1-4c. | Source of ongoing care: 18+ years * | 1999 | 2005 |
| 1-5. | Persons with a usual primary care provider * | 1996 | 2003 |
| 3-12b. | Adults ever receiving a sigmoidoscopy: 50+ years * | 2000 | 2005 |
| 5-15. | Annual dental examinations: diabetics 2+ years * | 1999 | 2005 |
| 8-1a. | Harmful air pollutants: ozone exposure [†] | 1997 | 2004 |
| 8-1e. | Harmful air pollutants: sulfur dioxide exposure [†] | 1997 | 2004 |
| 9-7. | Adolescent pregnancy: 15-17 years [†] | 1996 | 2000 |
| 13-11. | HIV testing in TB patients: 25-44 years [†] | 1998 | 2005 |
| 14-3a. | Hepatitis B: 19-24 years [†] | 1997 | 2005 |
| 14-29b. | Pneumococcal vaccine ever received: Noninstitutionalized adults 65+ years * | 1999 | 2005 |
| 15-3. | Firearm-related deaths * | 1999 | 2004 |
| 15-37. | Physical assaults: 12+ years [†] | 1998 | 2005 |
| 16-1c. | Infant deaths (within 1 year) * | 1998 | 2003 |
| 16-1d. | Neonatal deaths (within first 28 days of life) * | 1998 | 2003 |
| 16-3a. | Adolescent deaths: 10-14 years * | 1998 | 2004 |
| 21-10. | Annual dental visits: 2+ years * | 1999 | 2005 |
| 25-1d. | Chlamydia infections: females < 25 years in the National Job Training Program | 2002 | 2004 |
| 25-2b. | Gonorrhea: females 15-44 years [†] | 2002 | 2004 |
| 26-6. | Riding with a driver who has been drinking alcohol: high school students * | 1999 | 2005 |
| 26-16c. | Disapproval of 1-2 drinks a day of alcohol: high school seniors [†] | 1998 | 2004 |
| 27-17b. | Adolescent disapproval of smoking: high school sophomores [†] | 1998 | 2003 |

^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

* The increase in disparity from the baseline to the most recent data value is statistically significant at the 0.05 level.

[†] Measures of variability were not available. The statistical significance of changes in disparity could not be tested.

Disparities increased for three or more objectives in four focus areas: Environmental Health (FA-08), Access to Quality Health Services (FA-01), Maternal, Infant, and Child Health (FA-16), and Substance Abuse (FA-26).

Disparities increased for the Hispanic population for 27 objectives. The majority of the increases (81%) fell in the 10-49 percentage point range. One objective, recent use of cigarettes among high school students (27-2b), demonstrated an increase of 50-99 percentage points. An additional four objectives demonstrated an increase of 100 percentage points or more: exposure

to particulate matter and carbon monoxide (8-1b and 8-1c, respectively); new cases of tuberculosis (14-11); and binge drinking among adults (26-11c). Notably, the first three of these objectives appear among the ten largest disparities for the Hispanic population (see Table 2). This indicates that the disparities between the Hispanic population and the best racial and ethnic population for these objectives were not only large at the most recent data point, but that they had also increased since the baseline.

There are several focus areas in which disparities increased for three or more objectives. First, relative to the best group, disparities for the Hispanic population increased for four objectives in the Environmental Health focus area: exposure to particulate matter (8-1b), carbon monoxide (8-1c), ozone (8-1a), and sulfur dioxide (8-1e).

Disparities for the Hispanic population increased for three objectives in the Access to Quality Health Services focus area: Source of ongoing care (1-4a, 1-4b and 1-5). Disparities for the Hispanic population also increased for three objectives in the Maternal, Infant, and Child Health focus area: infant, neonatal and adolescent deaths (16-1c, 16-1-d and 16-3a).

Finally, there were three objectives in the Substance Abuse focus area (FA-26) that demonstrated *increases* in disparity for the Hispanic population between the baseline and most recent data points. This is an interesting finding given that there were eight objectives that demonstrated *decreases* in disparity within this same focus area (see Table 3). Thus, progress toward eliminating disparities for the Hispanic population is mixed for the Substance Abuse objectives.

- Overall, the most frequent combination of progress and disparity for the Hispanic or Latino population was movement toward the target with no change in disparity.

Table 5. Number of *Healthy People 2010* objectives by progress toward the target and change in disparity for the Hispanic or Latino population^a

| Progress toward the Healthy People 2010 target | Change in disparity* | | | Best group rate at most recent data point [§] | Total** |
|--|--|------------------------|--|--|------------|
| | Decreased 10 percentage points or more | No change [†] | Increased 10 percentage points or more | | |
| Met or exceeded target | 3 | 11 | 1 | 3 | 18 |
| Moved toward target [¶] | 22 | 75 | 16 | 10 | 123 |
| No change or moved away from target [#] | 13 | 52 | 10 | 5 | 80 |
| Total | 38 | 138 | 27 | 18 | 221 |

^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

* Changes in disparity are based on the percentage point change in the percent difference from the best group rate.

[†] The percent difference from the "best group rate increased or decreased by less than 10 percentage points or larger changes were not statistically significant.

[§] If the Hispanic population became the best group rate through a reduction in disparity of 10 percentage points or more, the objective is counted in the first column, "Decreased 10 percentage points or more". This occurred in nine objectives

[¶] The difference between the data value at the baseline and the year 2010 target decreased.

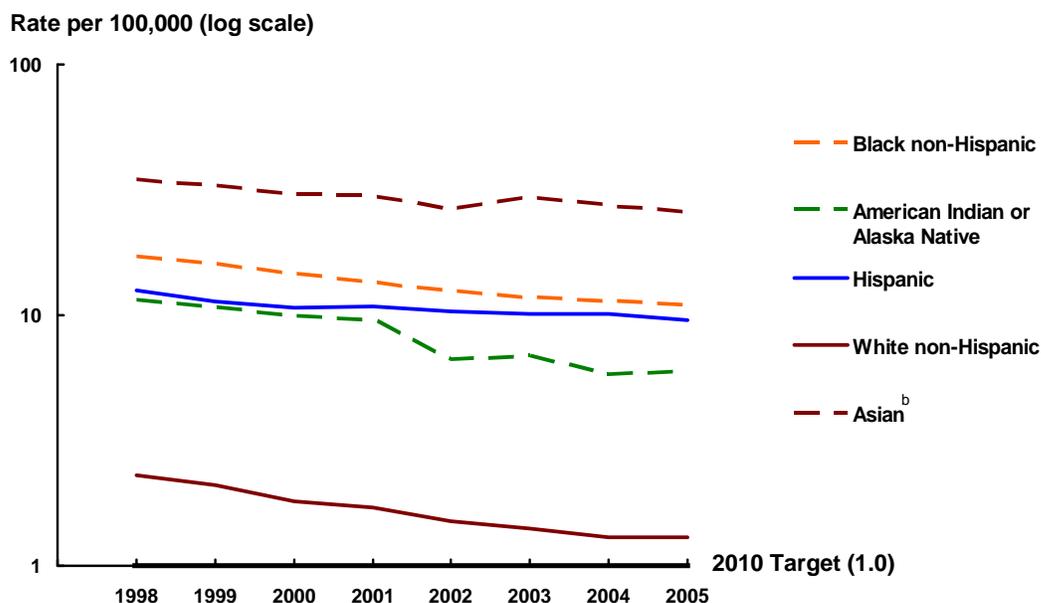
[#] There was no change in rates from the baseline to the most recent data point or the most recent data point is in the opposite direction from the target.

** Thirteen objectives that met the target at baseline are excluded from this table.

There were 234 objectives with the data required to assess both progress toward targets and changes in disparity. The target was met at the baseline for 13 of these objectives; these objectives are excluded from the table above. As Table 5 illustrates, progress toward a Healthy People 2010 target is not necessarily associated with a reduction in disparity (3). Among 123 objectives that were moving toward the target, disparities decreased by 10 percentage points or more for 22 objectives, increased by 10 percentage points or more for 16 objectives, and did not change for 75 objectives. Among all three categories of progress, the most common disparity outcome was "no change" (a percent difference of less than 10 percentage points or a larger change that was not statistically significant).

- **Example:** *Although the rate of new tuberculosis cases (objective 14-11) decreased for all racial and ethnic groups between the baseline and most recent data point, the disparity for the Hispanic group relative to the best group increased during this interval.*

Figure 5. New cases of tuberculosis: United States, 1998-2005 ^a



^a Based on data in the Healthy People 2010 database, DATA2010, as of August 2007.

^b Data for 1998-2002 are for the Asian or Pacific Islander population.

Tuberculosis rates decreased for all racial and ethnic groups between 1998 and 2005. However, the Healthy People 2010 target of 1.0 per 100,000 population was not achieved by any group. The disparity between the Hispanic population and the best racial and ethnic population (non-Hispanic white) increased during this period. The percent difference between the Hispanic rate and the non-Hispanic white rate was 448 percent at the baseline (1998) and 631 percent at the most recent data point (2005). The reason for the increase in the relative disparity was that the non-Hispanic white group moved toward the target by a greater proportion than the Hispanic group. This example demonstrates that progress toward a Healthy People 2010 target can be independent of reductions in disparities.

SUMMARY

- Data for the Hispanic or Latino population were available for at least one time point for 358 of the 504 Healthy People 2010 population-based objectives (71%).
- Between the baseline and the most recent data point, the Hispanic population moved toward the target for 52 percent of the population-based objectives and met or exceeded the target for an additional 14 percent.
- .
- Disparity between the Hispanic population and the other racial and ethnic populations could be assessed for 328 population-based objectives. The Hispanic population had the best rate for at least one objective in 22 of the 27 focus areas with population-based objectives. Overall, the Hispanic population had the best rate for 16 percent of these objectives.
- The four largest disparities for the Hispanic population relative to the other racial and ethnic populations were related to infectious diseases.
- The change in disparity between the Hispanic population and the racial or ethnic population with the best group rate was categorized as no change (less than 10 percentage points and/or not statistically significant) for 72 percent of the objectives between the baseline and most recent data point.
- Among the 67 objectives that demonstrated changes in disparity over time for the Hispanic population, decreases outnumbered increases. However, the magnitude of the increases and decreases were small (10-49 percentage points) for the majority of these objectives.
- Progress toward Healthy People 2010 targets and changes in disparity are independent. Overall, the most frequent combination of progress and disparity for the Hispanic or Latino population was movement toward the target with no change in disparity.

REFERENCES

1. Office of Disease Prevention and Health Promotion. *Healthy People 2010* Midcourse Review. December 2006. <http://www.healthypeople.gov/data/midcourse/default.htm#pubs> (accessed August 6, 2008).
2. Keppel K, Garcia T, Hallquist S, Ryskulova A, Agress L. Comparing racial and ethnic populations based on Healthy People 2010 objectives. *Healthy People Statistical Notes*, no. 26. Hyattsville, Maryland: National Center for Health Statistics. 2008.

3. Keppel K, Bilheimer L, Gurley L. Improving population health and reducing healthcare disparities. *Health Affairs*. 26 (5):1281 - 92. 2007.
4. Bilheimer LT, Sisk JE. Collecting adequate data on racial and ethnic disparities in health: The challenges continue. *Health Affairs*. 27 (2): 393 – 91. 2008.